DanChem Technologies, Inc.

1975 Old Richmond Road
Danville, Virginia 24540
Phone (434) 797-8100
www.danchem.com

February 18, 2011

U.S. Environmental Protection Agency – Region III
Attn: Kenneth J. Cox
1650 Arch Street
Philadelphia, PA 19103

Re: Notice of Violation, Docket No: R3-11-NOV-RCRA-16
Compliance Evaluation Inspections
June 2, 2009 and November 15, 2010
EPA ID No. VAD~~005007679~~ 988170 684

Dear Mr. Cox:

As discussed in our telephone conversation on February 16, 2011, DanChem Technologies, Inc. (DanChem) would like to provide the following response to the Notice of Violation (NOV) which it received from the Environmental Protection Agency (EPA) as a result of the June 2, 2009 and November 15, 2010 site inspection. In the NOV, two specific violations of 9 VAC 20-60-265 and 40 CFR §265 Subparts BB and CC were cited.

Violation #1 states, "Based on the observations and discussions during the inspection it appears that DanChem has some pumps (Photos 3 & 8) and associated equipment which may be subject to 9 VAC 20-60-265 [40 CFR §265 Subparts BB]."

1) Photograph 3 showed a multipurpose, portable, air diaphragm pump that was located in front of Reactor R-5 on the ground floor of Plant 1. This pump and others in Plant 1 are used for three purposes:

   a) Processing Commercial Chemical Products:

      At the time of the inspection, the pump photographed was staged in front of Reactor R-5 to transfer product from the reactor through a filter housing and filter media prior to charging the product into finished product containers.

   b) Charging Raw Materials:

      The pump shown in this photograph and other similar pumps in Plant 1 are also used for charging materials into the processing vessels. Raw material containers are typically staged nearby the vessel and a drumming wand is inserted into the container. The raw materials are then pumped from the container into the vessel.

c) Discharging Wastewater:

During the inspection, it was discussed that some hazardous waste is generated from a solvent process that includes, but is not limited to, the use of acetone, xylene, toluene, and methyl ethyl ketone. It was discussed that these solvents are periodically used to clean out the reactor vessels. The spent solvents generated from that cleaning operation are drummed gravimetrically and then reused "as is" or sent off site for proper management as F003 and F005 listed hazardous wastes. A light coating or residue consisting of previous commercial chemical products and trace amounts of solvents remains on the walls of the vessels. DanChem then typically washes the vessels out with water and sometimes a soap solution. This waste wash water carrying the product and solvent residue then flows to a floor drain where it can either gravity drain or be pumped to the facility's effluent basin where it is eventually discharged to the City of Danville Wastewater Treatment Facility (POTW) under an Industrial Wastewater Discharge Permit.

2) Photograph 8 showed a portable, air diaphragm pump that was located on the ground floor of Plant 3. Similar to the "Discharging Wastewater" process described in Paragraph 1(c) above for Plant 1, the pump in Plant 3 is used to pump the waste wash water carrying the product and solvent residue to a tanker trailer for accumulation and storage of wastewater prior to offsite disposal.

This wastewater is transferred to a tanker trailer instead of the facility's effluent basin because the process in Plant 3 includes toluene as a raw material. DanChem's Industrial Wastewater Discharge Permit with the City of Danville establishes a low discharge limit for toluene, 0.028 parts per million. DanChem has chosen to dispose of this material offsite to minimize potential noncompliance with the wastewater discharge permit.

Based on the usage scenarios described above in Paragraph 1(a) and Paragraph 1(b), in which the Plant 1 pumps contain and come in contact with commercial chemical products and raw materials, DanChem believes these materials do not meet the EPA's definition of *solid wastes* and therefore do not meet EPA's definition of *hazardous waste*.

The usage scenarios described above in Paragraph 1(c) and Paragraph 2 generate process waste wash water which meets the EPA's definition of *solid waste*. DanChem must take into consideration if this waste stream is a *hazardous waste*. To decide if it is a *hazardous waste*, DanChem must determine if it is:

- Listed in 40 CFR §261, Subpart D
- Exhibits a characteristic defined in 40 CFR §261, Subpart D
- Mixed with listed waste per 40 CFR §261.3(a)(2)(iv), the "mixture rule"

In the attached RCRA Online letter #13066, dated October 26, 1987, EPA concluded that trace solvents that remain in a reactor vessel following clean out of the vessel do not meet the spent solvent definition. Subsequent soap and water washout generates process

wastewater containing solvent constituents that can be ignitable (D001), but this wastewater is not F-listed hazardous waste nor is it hazardous waste via the mixture rule. This EPA letter is listed on EPA's RCRA Online Web site as "Official OSW Policy."

If DanChem in the determination of *hazardous waste* can eliminate this process wastewater from "listing" in 40 CFR §261, Subpart D and therefore also exclude the "mixture rule", DanChem is left with determining if the material exhibits a characteristic of a hazardous waste.

DanChem uses its generator knowledge of Plant 1 processes to determine if the wastewater has the potential to exhibit a hazardous waste characteristic. If there is any uncertainty about the waste stream's characteristics, DanChem will test to confirm that it does not have the characteristic before discharging the wastewater to the effluent basin and to the City of Danville Wastewater Treatment Plant.

In the case of Plant 3 wastewater, DanChem has in the past tested this water to confirm that it does not carry the characteristic of ignitability (D001). In response to the most recent EPA visit, DanChem has once again tested this wastewater. These wastewater samples were drawn directly from the bottom of the vessel during a wash water rinse to ensure the worst case contamination of toluene and the samples were found to have a flash point greater than 180 degrees Fahrenheit.

DanChem has also contacted its Plant 3 wastewater handler. According to HOH Corporation, flash point has never been a concern of theirs because the stream is predominantly water with only a trace amount of toluene. Neither DanChem nor HOH Corporation is aware of any instance when this process wastewater has exhibited the ignitability characteristic.

Therefore, DanChem believes 9 VAC 20-60-265 [40 CFR §265 Subpart BB] which according to the Applicability paragraph of 40 CFR §265.1050 applies to "equipment that contains or contacts *hazardous wastes*...," is not applicable to these pumps and associated equipment.

Regarding Violation #2, the EPA notification letter states, "Based on the observations and discussions during the inspection it appears that DanChem uses tank trailers to accumulate and store wastewater prior to shipment (Photos 10 & 11) which may be hazardous and therefore possibly subject to 9 VAC 20-60-265 [40 CFR §265 Subparts CC]."

In accordance with the Applicability paragraph of 40 CFR §265.1080, Subpart CC applies to "facilities that treat, store, or dispose of *hazardous wastes* in tanks, surface impoundments, or containers...." DanChem believes 40 CFR §265.1050 Subpart CC is not applicable for the same reason discussed above for Violation #1. As discussed during the response to the initial EPA visit on June 2, 2010, DanChem is aware that Subpart CC is applicable to the spent solvents which DanChem manages as F003 and F005 listed hazardous wastes. DanChem believes that it properly manages these hazardous wastes in

accordance with 40 CFR §265.1050 Subpart CC through the use of U.S. Department of Transportation (DOT) fully-regulated containers.

Lastly, during the EPA visit on November 15, 2010, it was discussed that there is the potential for process equipment leaks and spills. While DanChem acknowledges that there exists a potential for equipment leaks and the potential for spills, DanChem manages this potential to the greatest extent feasible. In accordance with DanChem's Air Permit with the Commonwealth of Virginia [9 VAC 5-170-160], DanChem has instituted a fugitive Leak Detection and Repair Program to inspect and maintain its processing equipment. DanChem also implements work practices to minimize potential spills. As discussed during the February 16, 2011 telephone conversation, one common practice is to install fittings on hoses and piping systems in order to use nitrogen to force residual product and solvents into their containers prior to disconnecting the hose or fitting. DanChem believes that it controls leaks and spills to the greatest extent possible.

In conclusion, DanChem hopes you are in agreement that 9 VAC 20-60-265 and 40 CFR §265 Subparts BB and CC are not applicable to both violations provided in the EPA's notification letter. If there were any misunderstandings during the site visits or subsequent follow-up discussions, DanChem apologizes and hopes this letter has clarified our response. If you have any questions or concerns, please contact me at (434) 797-8108.

Sincerely,

Scott A. Veselicky

Scott A. Veselicky, MS, CSP
Director of Regulatory Affairs, DanChem Technologies, Inc.

9442.1987(06)

OCT 26 1987

Ronald J. Senna
Director - Environmental Compliance
International Flavors and Fragrances, Inc.
800 Rose Lane
Union Beach, N.J. 07735

Dear Mr. Senna:

This is in response to your letter of September 25, 1987, concerning the regulatory status of your fragrance ingredients. Based on the information you provided and the subsequent phone conversation with our consultant, Geo/Resource Consultants, Inc., EPA's understanding of the waste generation process is that Acetone, ethyl acetate, and xylene solvents are periodically used to clean out the reactor vessel. The spent solvents generated from that cleaning operation are drummed and sent off site for proper management as F003 wastes. A light coating or residue consisting of fragrance oils and trace amounts of solvents remains on the walls of the vessel. IFF then washes the vessel out with soap and water. This waste washwater carrying the oil and solvent residue then flows to an oil/water separator for treatment.

Based on this scenario, the Agency's interpretation is that the solvent-contaminated washwater is not within the scope of the Hazardous Waste No. F003 listing for spent nonhalogenated solvents. The subject waste stream is generated from the washout of a reactor vessel containing residues of solvent and fragrance oils. Therefore, the waste is not a spent solvent, but a process wastewater contaminated with solvent constituents. This waste is very different from a solvent stream that has been used and as a result of contamination can no longer be used as a solvent without further processing (see Section 261.2(c)(1) and 50 FR 53316). It is not the Agency's intent to regulate water from washout of a reactor vessel as F003.

If the washwater sent to the oil/water separator is ignitable, it would be classified as D001 hazardous waste, and would remain such for as long as it exhibits the ignitability characteristic. According to 40 CFR Section 261.3(c) and (d), any residues resulting from treatment of D001 are hazardous wastes only if they continue to exhibit a characteristic found under 40 CFR, Part 261, Subpart C.

If you have any further questions in this area, please contact Michael Petruska of my staff at (202) 382-7729.

Sincerely,

Original Document signed

Marcia E. Williams
Director, Office of
Solid Waste

cc: Kurt Whitford, N.J. DEP
Sam Ezekwo
EPA Region II
Air and Hazardous Waste Division

U.S. ENVIRONMENTAL PROTECTION AGENCY

RCRA Online

Document Record Detail

Full Document:	
Title:	REACTOR VESSEL WASHOUT CONTAINING TRACE AMOUNTS OF SOLVENT
RCRA Online Number:	13066
Date:	10/26/1987
To:	Senna
From:	Williams
Organization of Recipient:	International Flavors and Fragrances, Inc.
Description:	Reactor vessel washout containing residues of solvent (acetone, ethyl acetate, and xylene) and fragrance oils is not F003, but is process wastewater contaminated with solvent constituents. If the wastewater is ignitable, it is regulated as D001 until it is no longer characteristic.
Regulatory Citation(s) :	261.3(a), 261.3(c)(2), 261.3(d), 261.21, 261.31 EXIT Disclaimer
Statutory Citation(s):	NA Read US Code 42, Chapter 82 EXIT Disclaimer
Topic(s):	Characteristic Wastes; F-wastes; Hazardous Waste; Industrial Wastes; Solvents
Approximate Number of Hardcopy Pages:	2
EPA Publication Number:	NA
RPPC Number (if applicable):	9444.1987(49)
Official OSW Policy:	Yes

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Withdrawn
No Violation

VIA UPS

Mr. Wayne C. Smith, Vice President
DanChem Technologies, Inc.
1975 Old Richmond Road
Danville, VA 24540

Re: Notice of Violation
Compliance Evaluation Inspections
June 2, 2009 and November 15, 2010
EPA ID No. VAD005007679

Docket No: R3-11-NOV-RCRA-16

Dear Mr. Smith:

On June 2, 2009 and November 15, 2010, the U.S. Environmental Protection Agency, Region III ("EPA") conducted a Compliance Evaluation Inspection ("CEI") of your facility under the federally authorized Commonwealth of Virginia Hazardous Waste Management Regulations ("VAHWMR") and the Resource Conservation and Recovery Act ("RCRA"), as amended, 42 U.S.C. Sections 6901 et seq. The first Inspection Reports has already been sent under cover letter dated September 17, 2009. The follow-up is enclosed with this letter. Based on the inspections, EPA has determined that DanChem in Danville, VA (the Facility or DanChem) has violated regulations under VAHWMR and RCRA. As a result of this determination, EPA is issuing this Notice of Violation ("NOV"). The specific violations are:

1. Based on the observations and discussions during the inspection it appears the Danchem has some pumps (Photos 3 & 8) and associated equipment which may be subject to 9 VAC 20-60-265 [40 CFR §265 Subpart BB]. There was no record on the facility's operating log as required by 9 VAC 20-60-265 [40 CFR §265.1064(k)].

2. Based on the observations and discussions during the inspection it appears the Danchem uses tank trailers to accumulate and store wastewater prior to shipment (Photos 10 & 11) which may be hazardous and therefore possibly subject to 9 VAC 20-60-265 [40 CFR §265 Subpart CC]. Waste going into the tank must be evaluated at the point of generation, prior to placement in the tank, to determine if the waste contains less than 500 ppmw of volatile organics to be able to claim the exemption. DanChem has never made a waste determination as required by 9 VAC 20-60-265 [40 CFR §265.1084] to be able to claim the exemption.

Also enclosed with this letter is an EPA letter dated April 20, 1987 which addresses the regulatory status of tanks, such as the "blue tank", used to store hazardous wastes in response to emergencies.

Within twenty (20) calendar days of the receipt of this NOV, please submit a response documenting the measures the facility has taken or is taking to achieve compliance with the violations noted above or provide an explanation of facts and circumstances that cause you to believe that EPA's determination of the alleged violations are in error. If the compliance measures identified are planned or are on-going, please provide a schedule for when the compliance measures will be completed.

Section 3008(a) of RCRA authorizes EPA to take an enforcement action whenever it is determined that any person has violated, or is in violation, of any requirement of RCRA as amended. Such an action could include a penalty of up to $37,500 per day of violation. In addition, failure to achieve and maintain compliance with the regulations cited in this NOV may be treated as a repeated offense and may constitute a "knowing" violation of Federal law.

This NOV is not intended to address all past violations, nor does it preclude EPA from including any ongoing, including the one cited in this letter, or past violations in any future enforcement action. Response to this NOV shall be addressed to:

Kenneth J. Cox
Land and Chemicals Division (3LC70)
U.S. Environmental Protection Agency - Region III
1650 Arch Street
Philadelphia, PA 19103

With regard to the Small Business Regulatory Enforcement and Fairness Act (SBREFA), please see the "Information for Small Businesses" memo, enclosed, which might be applicable to your company. This enclosure provides information on contacting the SBREFA Ombudsman to comment on federal enforcement and compliance activities and also provides information on compliance assistance. As noted in the enclosure, any decision to participate in such program or to seek compliance assistance does not relieve you of your obligation to respond in a timely manner to an EPA request or other enforcement action, create any rights or defenses under law, and will not affect EPA's decision to pursue this enforcement action. To preserve your legal rights, you must comply with all rules governing the administrative enforcement process. The Ombudsman and fairness boards do not participate in the resolution of EPA's enforcement action. EPA has not made a determination as to whether or not you [or your company] are covered by the SBREFA.

/S/

Carol Amend, Associate Director
Land and Chemicals Division
Office of Land Enforcement

1/28/11

Date

Enclosure

cc: Justin L. Williams (VADEQ) with Enclosure
Terry DiFiore (3WC31) w/o Enclosure
Ken Cox (3WC31) w/o Enclosure

INSPECTION REPORT

for

RCRA Subtitle C

at

DANCHEM TECHNOLOGIES, INC.

1975 Old Richmond Road

Danville, VA 24540

VAD988170684

Large Quantity Generator

Inspection Date

November 15, 2010

Kenneth J. Cox
Land and Chemicals Division
December 9, 2010

Danchem Technologies, Inc.
Danville, VA 24540
November 15, 2010

VAD988170684

Inspectors:

Kenneth J. Cox - USEPA (215-814-3441)
Todd Nash – VADEQ (434-582-6215)

Facility Representative:

Scott A. Veselicky – Director of Regulatory Affairs (434-797-8120 ext. 108)
Charlie B. Martin, Jr. – Site Safety Coordinator (434-797-8120 ext. 234)
Wayne C. Smith – Vice President (434-797-8106) Exit Conference Only

Background

Danchem Technologies, Inc. (Danchem or the Facility) was selected for inspection by EPA's Land and Chemicals Division, Office of Land Enforcement as part of its FY 11 inspection plan. The purpose of the inspection was to do a Focused Compliance Inspection (FCI) to evaluate the facility's compliance with the surface impoundment and air emission regulation under Resource Conservation and Recovery Act (RCRA). The Virginia Department of Environmental Quality (VADEQ or DEQ) was notified two weeks in advance and sent inspector Todd Nash as their representative. All facts in this report are based on the inspectors' observations, comments by the facility representatives, or documents reviewed before, during, or after the on-site inspection.

Opening Conference

The inspectors entered the facility shortly after 9:00 AM. We were met by Mr. Veselecky and taken to a conference room. Credentials were shown and the purpose of the inspection was identifies to be a follow up of two outstanding issues from a prior compliance evaluation done by EPA on June 2, 2009.

A review of the facility processes was made to evaluate how waste solvent and waste water are managed at the facility. Of particular interest was wastewater that is managed in the on-site surface impoundment called the "basin" and air emission requirements for waste equipment and tanks that manage solvents.

Manufacturing Processes

Danchem describes itself as a toll manufacturer of specialty chemicals, mostly on a short term basis. The Danchem manufactures chemicals for customers who have a short term need for them such as making test batches of different product lines. There is also manufacturing of chemicals of special purity or constituents for customers on a long term basis. The facility has six different plants on site and one wastewater treatment system.

PLANT #1 is the site where the short term specialty chemicals are made in 15 different reactors. The batches can be either solvent or water based processes. The wastewater is sent to HOH Inc. in North Carolina for treatment and the solvents (mostly xylene and IPA) are drummed and sent for disposal as a hazardous waste.

PLANT #2 is dedicated to the production of high purity lime under a long term contract with DuPont. The process generates a wastewater with a high pH (12.5 and above) that is sent to the basin after neutralization.

PLANT #3 is dedicated to a production of ISP. The process generates a toluene waste which is managed in drums. The floor drains are sealed to prevent contamination of the wastewater system.

PLANT #4 is connected to plant #1 and has dryers for the products produced there.

PLANT #5 is a dedicated to the production of food quality additives to over the counter medications. The process generates wastewater that is sent to the basin.

PLANT #6 is dedicated to the production of an additive to cattle feed. The process generates wastewater that is sent to the basin.

On the basis of the chemical manufactured and/or the generation of solvent waste, the inspection was focused on Plant #1, #2, and #3.

Wastewater Management

Process related wastewater is sent to the basin from plant #2 (pH 11.5), plant #5 (pH 4-5) and plant #1/#4 depending on the batch being run at the time. The underground process sewer is also servers as the stormwater collection system. The basin has a single PVC liner and the sediment is periodically cleaned out and disposed of a non hazardous waste.

There is no treatment in the basin. The only wastewater treatment at the facility is elementary neutralization which takes place at plant #2 at the point of generation. There is a large pump near the outlet end of the basin that creates a clockwise circulation around the basin prevents dead zones and provide a mixing of the various inputs. The effluent is sent to Danville's POTW which has issued a pretreatment permit. The POTW encourages a high pH

discharge from Danchem to buffer low pH flows from other industrial users. Danchem's effluent averages a pH of 10-11.5.

There is a stand-by 40,000 gallon tank located at the basin headwork which is used in emergencies to capture spills or treatment problems in plant #2. Chemical spills are sampled and disposed of as either hazardous or non hazardous within the next couple of days. A recent spill of 15 gallons of xylene in plant #1 resulted 30,000 gallons being diverted from the process sewer and shipped off site as non hazardous waste. A recent slug of high pH water cause by fouling of the monitoring probes in plant #2 was held in the tank and bled into the basin slowly so the no violations occur.

Observations

PLANT #1 - A tour of plant #1 started on the second floor where raw materials are loaded into the reactors. Floor drains (Photo #1) lead to the basin. The ground floor is drained by a trench drain. The floor is reported to be always wet (Photo #2) from numerous source such as condensate or the wash down that takes place at the end of every shift. This wet floor was observed in other plants as well. Portable pumps (Photo #3) are used to empty reactor. The pump is used for multiple purposes including pumping solvent when necessary. Reactors are normally drained of waste solvent by attaching a hose and filling drums or totes by gravity. The site of the xylene spill mentions above actual occurred in a dried finished product storage area (Photo #4) when a valve was opened on the second floor to pipe the solvent to a first floor drum fill station. When the worker came down to the first floor to put a drum under the fill line he found that the valve at the fill station had been left open which caused the spill.

WASTEWATER BASIN - Wastewater is pumped to the basin or is drained by gravity. The facility is migrating to above ground piping for wastewater in order to have greater control of process wastewater and to avoid possible underground leaks. Photos #5 - #7 show the bypass pump and tank at the point that the main sewer enters the basin, the stormwater and process discharge points, and the basin outlet and monitoring point. At the time of the inspection the influent was pH 10.85 and the effluent was pH 10.84.

PLANT #3 – Because of the use of solvent in this process the decision was made to seal off all drains to the process sewer. Wash down water and condensate are pumped from the floor drains (Photo #8) to a tank truck outside (Photos #10 and #11) which is then shipped to HOH for disposal.

PLANT #2 – The process here produces high quality lime and a wastewater above 12.5. Elementary neutralization with acid is accomplished in tank #13 to bring the pH below 12.0. Once neutralized the wastewater is pumped to tank #12, a 20,000 gallon tank just outside the plant to allow the pH to stabilize before releasing to the basin. At the time of the inspection, tank #12 had a pH of 11.3.

Exit Conference

A brief exit conference was held with Mr. Veselicky, Mr. Martin, and Mr. Smith. The following areas of concern discussed were:

1. Danchem needs to make determinations for the applicability of air emission standards in 40 CFR 265 Subpart BB. In particular, the fixed pump in the Plant #3 floor drain and the portable pump in Plant #1. A determination of applicability of 40 CFR 265 Subpart CC for the open top tank truck accumulating contaminated water needs to be made.

2. Danchem must evaluate wastewater contamination as a possible listed waste and not just as a possible characteristic waste.

3. Danchem can not use the basin for dilution of wastes with a pH above 12.5 since the single liner impoundment does not meet RCRA standards. There was no evidence that is currently or was ever using this practice.

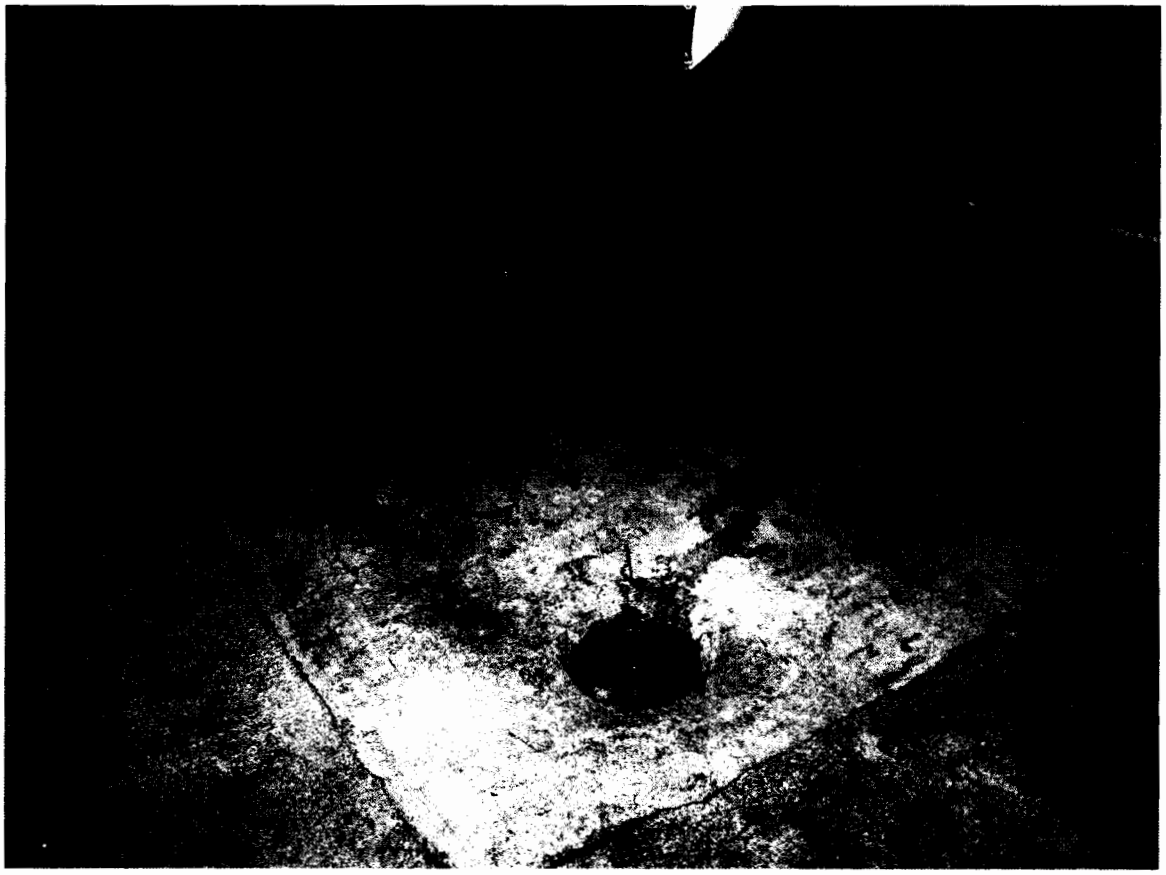

Photo #1 - Second floor drain in Plant #1 that leads to the wastewater basin.

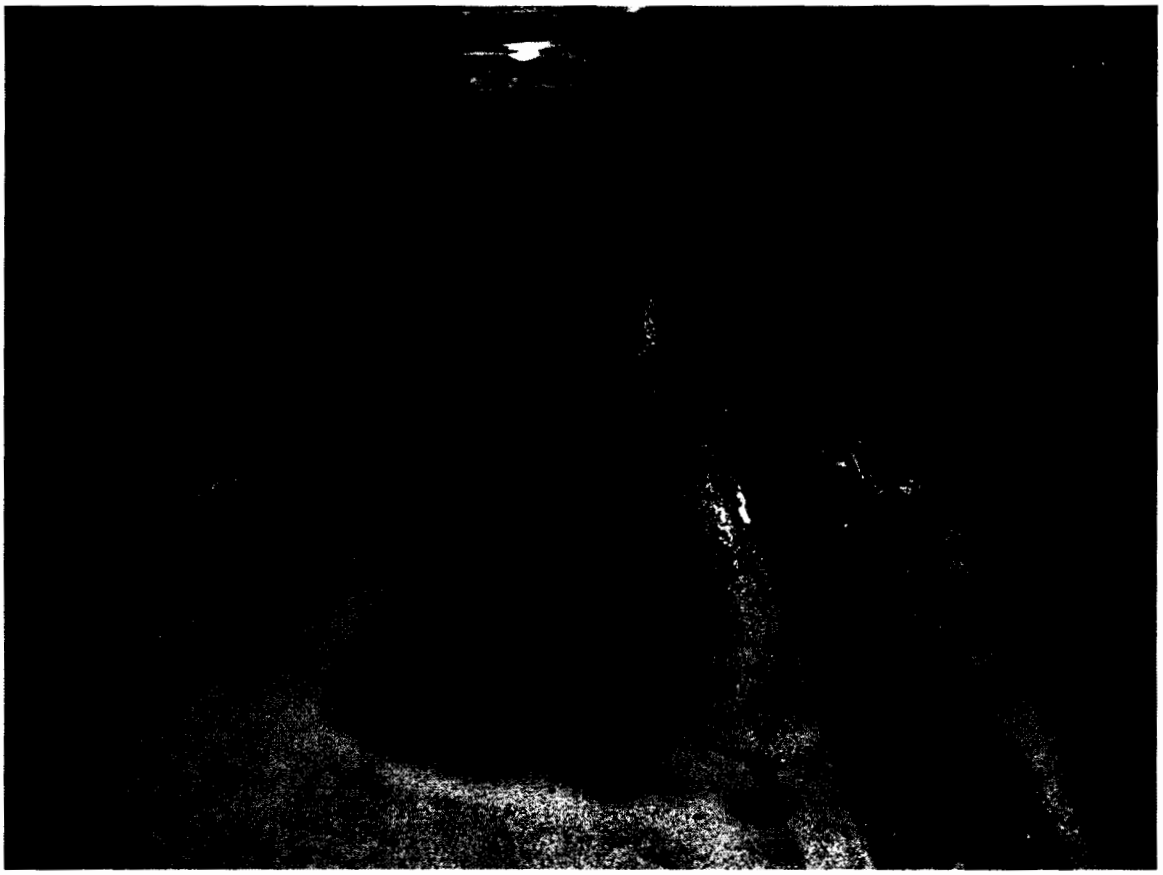

Photo #2 - First floor trench drain in Plant #1 that leads to the wastewater basin.

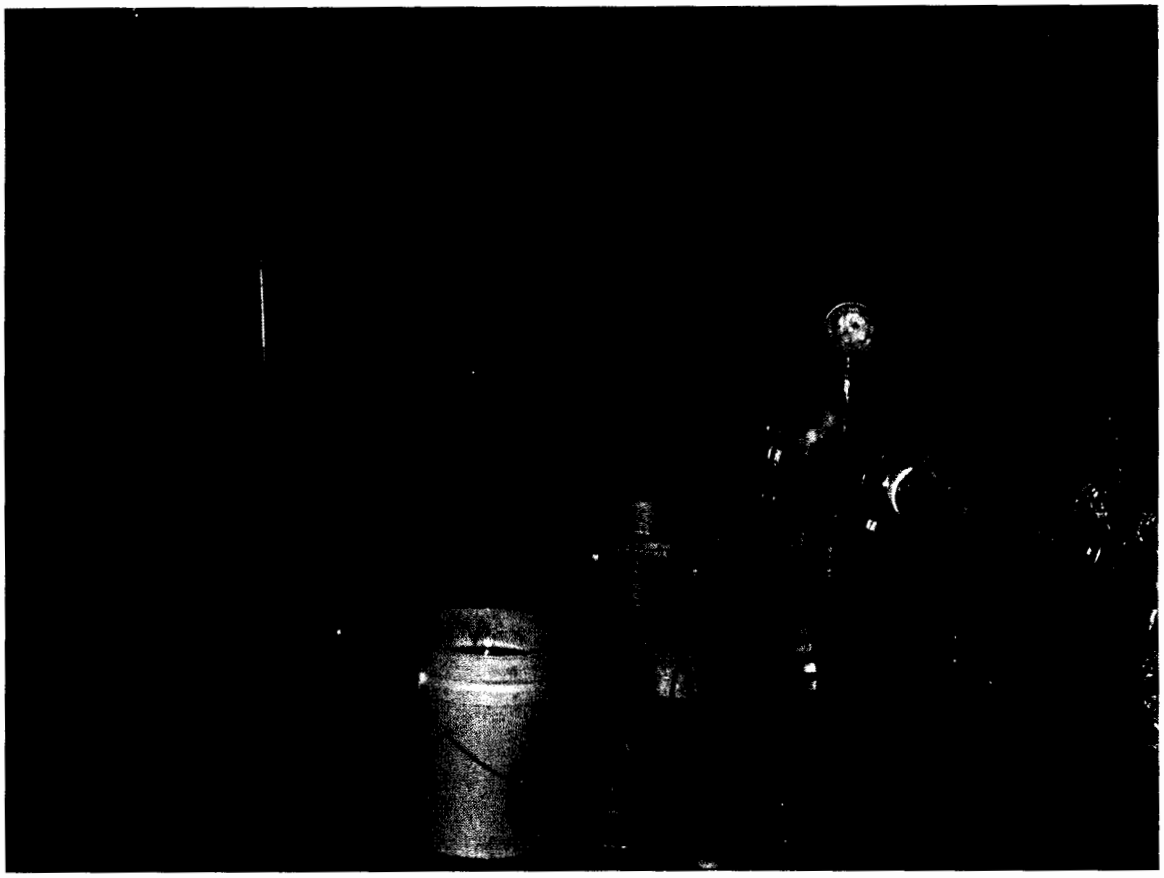

Photo #3 - Portable pump in front of reactor 5 in Plant #1. The pump is used for multiple purposes and is connected by hoses.

Photo #4 - Site of previous xylene spill. Containers of finished product are pile in front of the reactor.

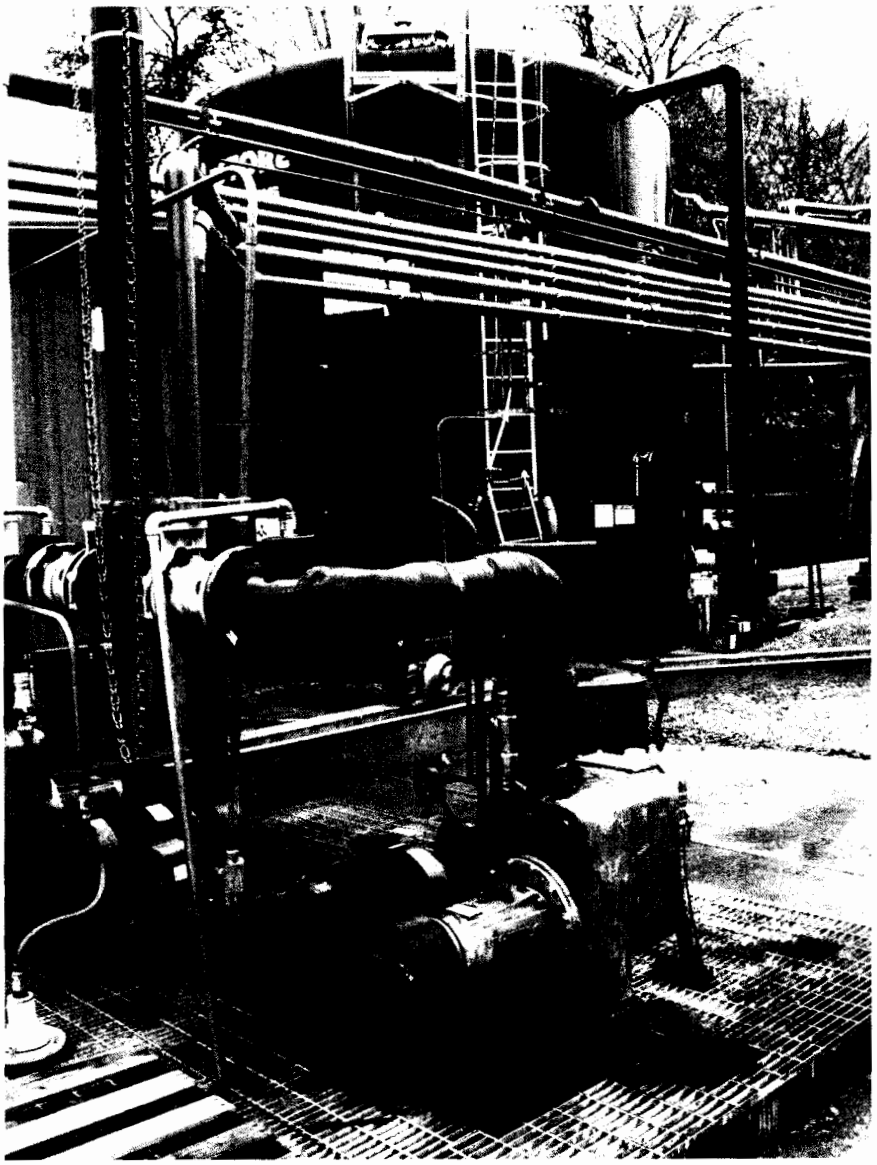

Photo #5 - Bypass pump at inlet to basin. Dark blue tank in the rear is used to contain spills or high pH wastewater.

Photo #6 - Multiple inlets for both process water and stormwater.

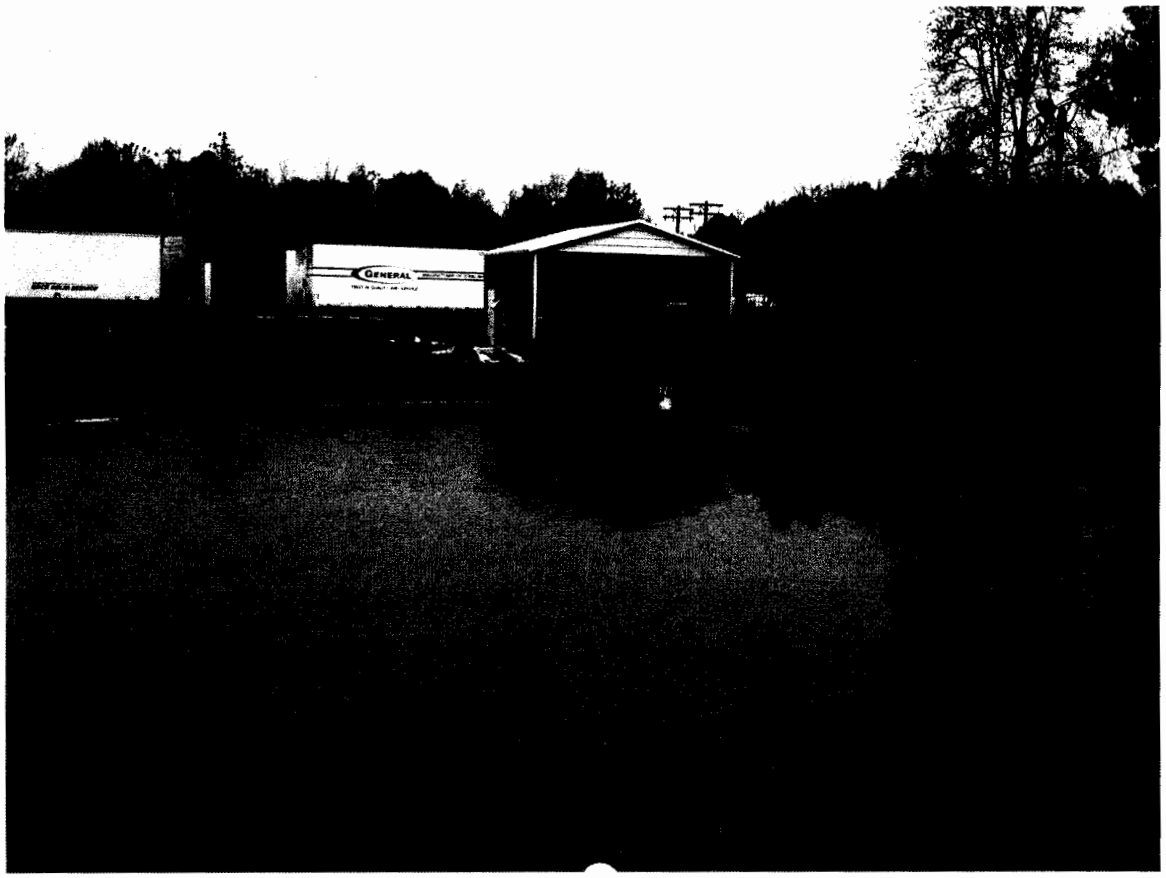

Photo #7 - Basin outlet and monitoring point at the blue building. The pipes and elevated pump to the right are to provide circulation in a clockwise direction to enhance mixing and prevent dead zones within the basin.

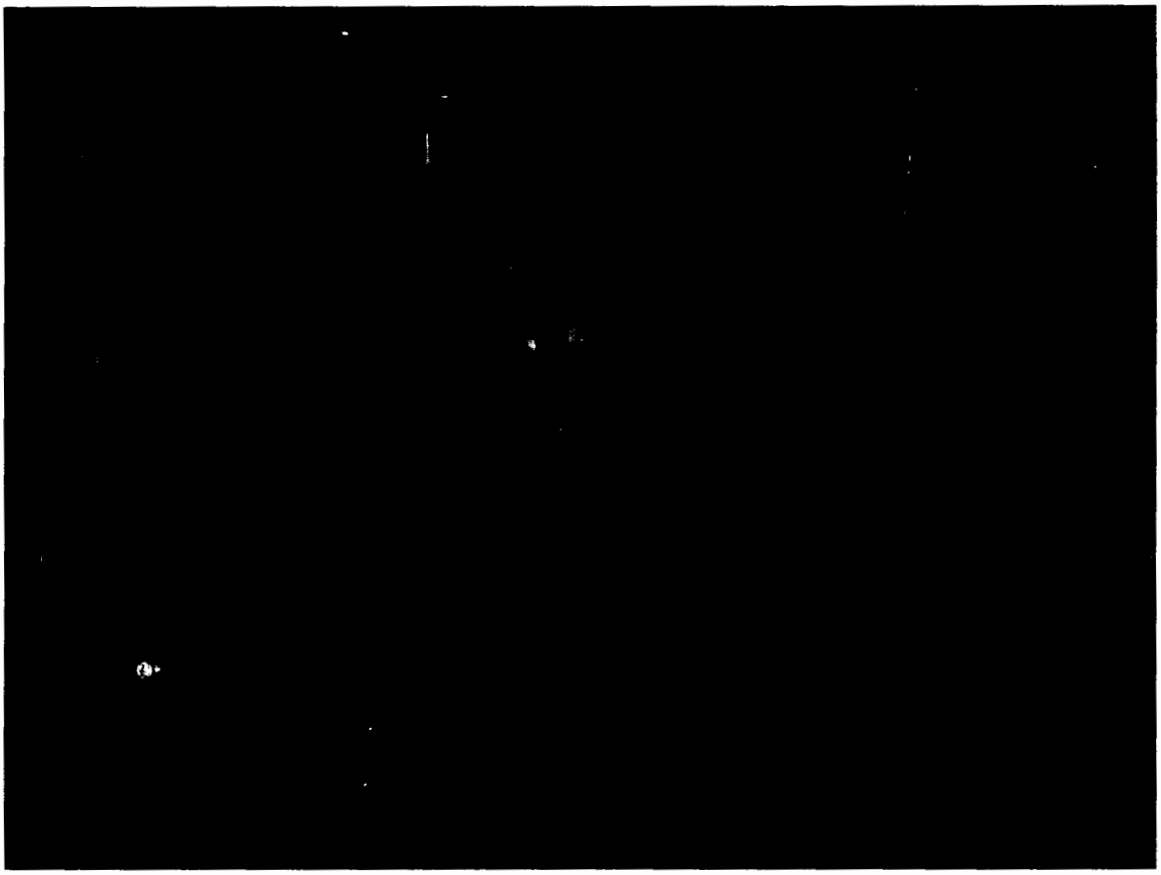

Photo #8 - Floor drain in Plant #3 is sealed off from the outside process sewer system leading to the basin. The pumps removes accumulated water, which can contain trace amounts of toluene, from the drain to a tank truck outside (Photos #10 & 11).

Photo #9 - Tanks containing product outside Plant #3. The containment is wet because it was raining at the time of the inspection. Rainwater is pumped to the tank truck shown in Photos # 10 & 11.

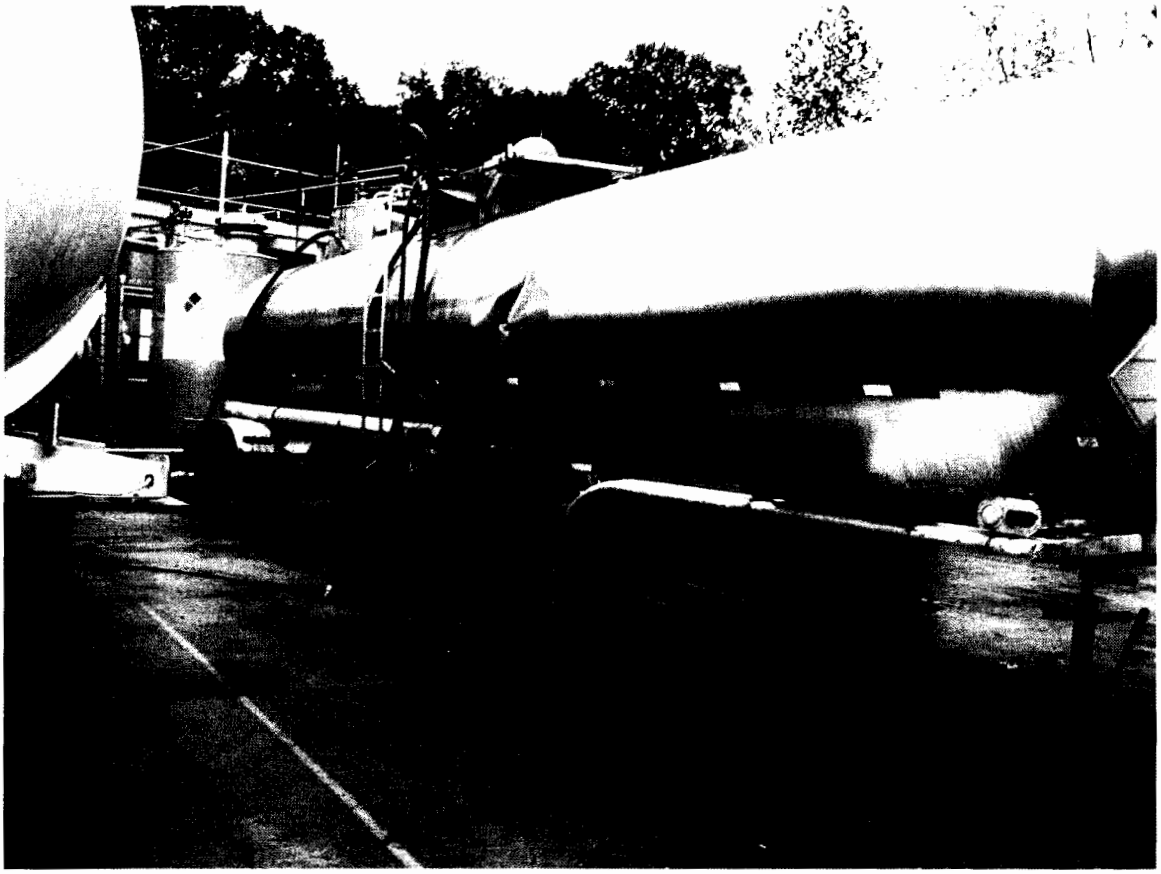

Photo #10 - Tank truck that receives wastewater from Plant #3 and stormwater runoff from possible containment areas into the open hatch in the top of the tanker.

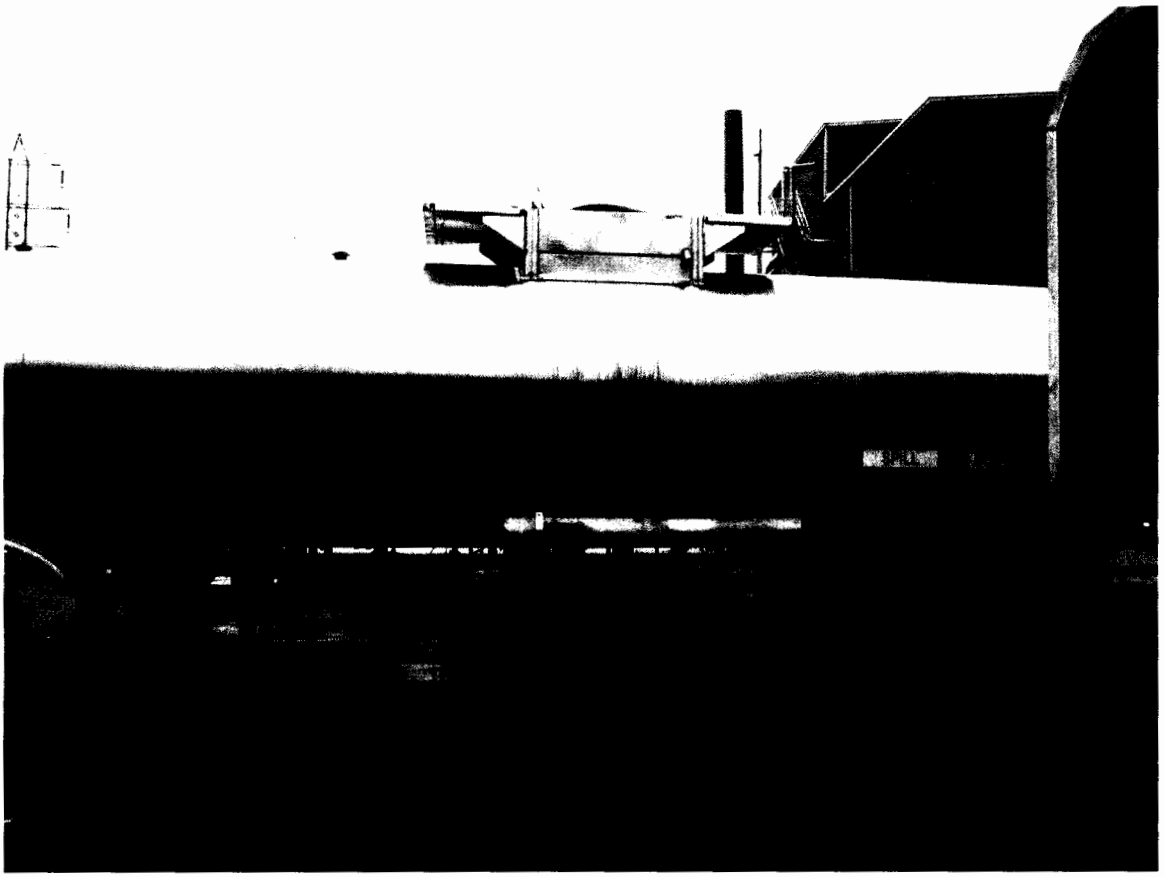

Photo #11 - Open top hatch in tank truck shown in Photo #10.

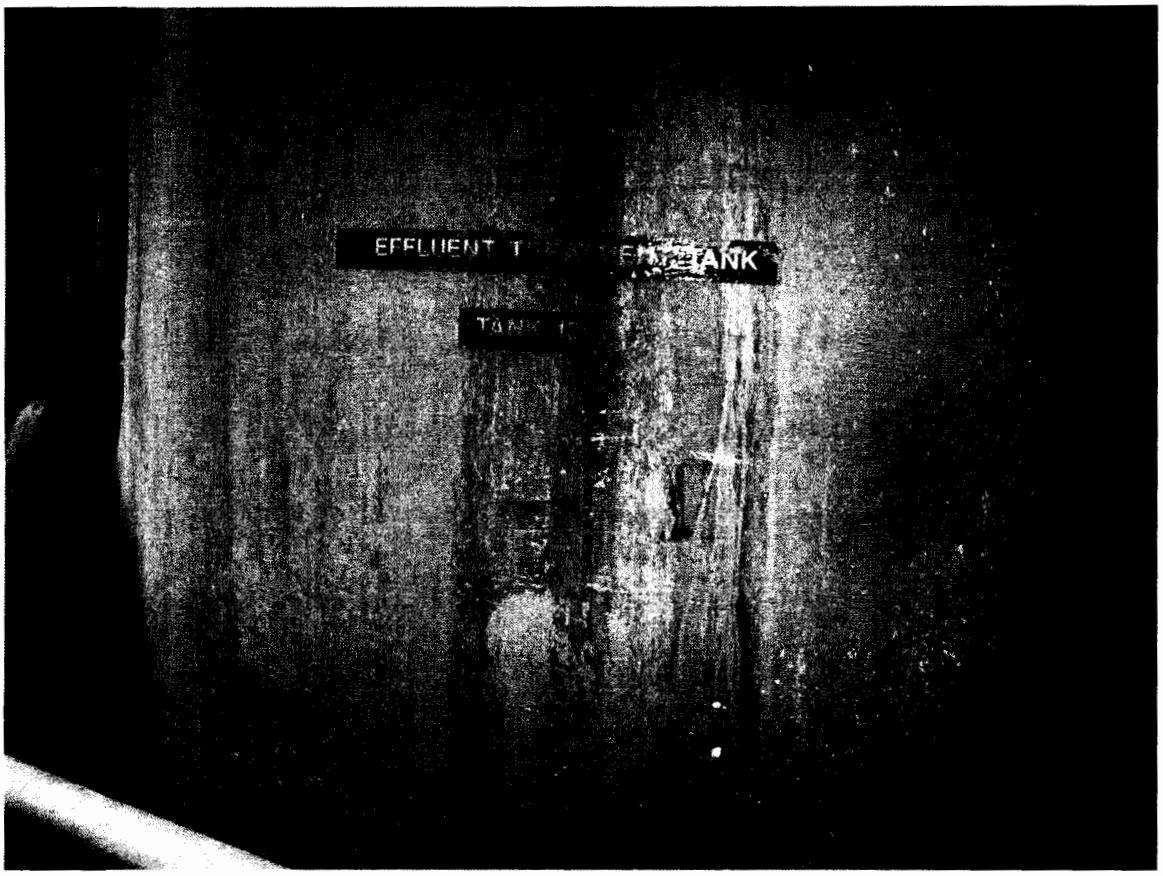

Photo #12 - Effluent treatment tank (T-13) in Plant #2. The effluent from the process is above pH 12.5 and in lowered below pH 12.0 in this tank.

Photo #13 - Buffer tank outside Plant #2 which receives neutralized wastewater from tank T-13 inside the plant. This tank discharges to the basin. The target range for pH of the discharge is 11.3 to 11.7.